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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,951	10/23/2003	Ronald A. Holland	C043770/0126119	6317
49328	7590	08/16/2006	EXAMINER	
BRYAN CAVE LLP			LUM VANNUCCI, LEE SIN YEE	
211 NORTH BROADWAY			ART UNIT	
SUITE 3600			PAPER NUMBER	
ST. LOUIS, MO 63102-2750			3611	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,951

Applicant(s)

HOLLAND, RONALD A.

Examiner

Lee Lum

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 44-48 and 54-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 44-48, 54-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An Amendment was filed 6/20/06.
2. The (Spec) Amendment filed 9/26/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure (filed 10/23/03) is as follows:

Paragraph 11 – description of the “first preferred embodiment” contains more detail than the original description; paragraph 14.

Deletion in paragraph 15 of an additional description of the “first embodiment”.

Description in paragraph 15 of the “second embodiment” – deletion of “brushless, gearless”, “A freewheel is not needed...”.

Deletion of additional information about the “second embodiment” – deletion of original, additional info (paragraph 20) of this embodiment beginning with “...can also be fitted with the downhill regenerative braking. ...”.

Paragraph 17 – entire paragraph contains more information of the “third embodiment” than original paragraph 21, including “is the same as the second embodiment”, “either brush or brushless”, and “between about 10 to 1 and about 20 to 1”, which differs from the original range of “about ten to one or above”.

Applicant is required to cancel the new matter in the reply to this Office Action.

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3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10, 44-48, 54-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 1, 44, 54, the addition of "single stage", as pertaining to the "drive", constitutes new matter because it is not disclosed in the original Spec, or original Claims.

In Claim 5, 48, 58, the deletions of "brushless" and "direct current" also constitute new matter for the same reasons.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- A. Claims 1, 2, 4, 44, 45, 47, 54, 55, 57** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudwick 4280581 in view of Phillips 6272941.

Rudwick discloses an electric drive vehicle/bicycle comprising
Frame 1,
Rear wheel 6 with unidentified hub, and rear wheel sprocket 25,
Electric motor 2 mounted to frame member 11, with motor sprocket 15 engaged with chain 10,
Pedal crank assembly 16 including chain wheel 8,
Derailleur 17,
Drive (assembly in fig 1) that is uni-directional (via clutches 13,30, respectively), and up-speed (increasing speed via derailleur 17, *as broadly and reasonably interpreted*),
engaging the rotatable assembly of the motor (via sprocket 15), and the crank assembly, for transferring motion from the pedal crank to the motor (c6, In 3-8; "With

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shafts 12 and sprocket 14 both turning the same RPM, both drive the sprocket 15), but not vice versa (due to clutches 13,30),

Whereby either/both pedal crank and motor drives the vehicle (c3, ln 39-52).

The reference does not disclose the drive as being single-stage (i.e., a single-stage reducer, *as broadly and reasonably interpreted*), while Phillips shows this arrangement with this type of reducer 11 in figs 3A,B, and c6, ln 36-39.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this configuration, as shown in Phillips, to provide a simple, yet reliable transmission, thus decreasing costs while providing an effective gear reduction.

B. Claims 3, 46, 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudwick in view of Phillips, and in further view of Lee et al 6446745.

The previous references do not disclose the rear hub as having internal gears, while Lee shows enclosed gear hub 34 in fig 1. It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this arrangement, as shown in Lee, to protecting the gears from the elements/environmental conditions, thus increase its proper operation and longevity.

C. Claims 5, 48, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudwick in view of Phillips, and in further view of Eguchi 6320336.

The previous references do not disclose the motor as gearless, and a power source that can be recharged, while Eguchi shows this arrangement with
direct-drive motor 4; and,
rechargeable battery 13 (c7, ln 66-67).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to include this configuration, as shown in Eguchi, to provide another, functionally equivalent motor for different applications, thus increase applicability. The type of motor is immaterial so long as it operates to provide desired/designed power.

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It would have been obvious to include a system to recharge the power source so to increase its longevity, and decrease replacement costs, and as is very well-known.

5. RESPONSE TO REMARKS

Upon reconsideration, Examiner has provided new rejections obviating all recited elements, and apologizes for the inconvenience. New 112 rejections are also provided towards additions/deletions to both Spec and Claims which render the invention unclear (the exact structure is entirely unclear due to two Spec amendments).

6. Communication with USPTO/Examiner

Any inquiry concerning this communication, or others, should be directed to Ms. Lum at 571 272-6649, M-Th, 9-6. If she cannot be reached, her supervisor, Ms. Morris may be reached at 571 272-6651. Our fax number is 703 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications: private PAIR. For published applications: private or public PAIR. Questions re private PAIR: contact the Electronic Business Center (EBC) at 866 217-9197.

Ms. Lee S. Lum-Vannucci
Examiner
8/15/06

A handwritten signature in black ink, appearing to read 'Lum-Vannucci', with a checkmark at the end.